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AUTHOR Kramer, Alice Poulsen
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ABSTRACT

The animistic beliefs of 40 schizophrenic children were compared with the beliefs of 40 normal children (age range for both groups from 11 to 15 years) in light of Jean Piaget's developmental stages of animistic thinking. Each S was tested individually on the Peabody Picture Vocabulary Test and on whether each of 20 objects was animate. Schizophrenic Ss were not more animistic in their beliefs than normal Ss. The normal Ss did show a negative relationship between IQ and degree of animistic beliefs which the schizophrenic Ss did not show. Schizophrenic Ss were not consistent in their animistic or naturalistic thinking as were the majority of normal Ss. A significant negative correlation between age and animistic beliefs was found, and most of the children could not be classified into one of Piaget's four stages of animistic thinking.
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A COMPARISON OF THE ANIMISTIC BELIEFS OF
SCHIZOPHRENIC CHILDREN WITH NORMAL
CHILDREN, AS REVEALED BY A TEST
BASED ON PIAGET'S RESEARCH

Alice Poulson Kramer, Ph.D.

St. John's University

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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Introduction.--The present study attempted to discover whether a test of animism, based on Piaget's research, would reveal a persistence of animistic beliefs among schizophrenic children. Animism refers to the attribution of life to inorganic objects.

Piaget (1929) stated that children go through four developmental stages in their animistic beliefs. In the first stage of animistic beliefs, which lasts up to the ages of six or seven, children attribute life to things which are useful, active, and in good condition. A child in the first stage will say that a pencil has life because it can write. Children in the second stage of animistic beliefs, who are usually six to eight years, believe that anything which moves has life. When the child is in the third stage of animistic beliefs, which lasts from ages eight to nine to eleven to twelve, he restricts life to only things which move by themselves. A child in the second stage believes that a bicycle has life because it moves. When the child reaches the third stage, he no longer believes that a bicycle has life because it does not move unless someone pedals it. In the fourth or adult stage, life

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to inanimate objects or to animals and plants. Piaget found that three-quarters of children do not reach this stage before the ages of eleven to twelve.

There is a growing interest in the relevance of Piaget's theory to psychoanalytic theory and to the understanding of psychotic illness. Some theoreticians interpret the animistic thinking clinically observed among schizophrenics in terms of Piaget's theory. For example, Esther Halpern (1966) studied a 14 year old schizophrenic boy over a period of ten years. She found that traditional intelligence tests revealed that the boy had average intelligence, but failed to reveal a lag in specific areas of thinking. The Piaget tasks, however, did reveal specific lags in the boy's thinking, and revealed that this 14 year old boy's concept of life was typical of a seven year old child. Halpern found that this boy, like most childhood schizophrenics, had been described on the interview and on the Rorschach as "identifying with inanimate objects, with the implication of animistic thinking." She pointed out that research was needed to investigate whether this type of pre-causal thinking could become an operational definition of what has been clinically described as identification with inanimate objects.

Other theoreticians have also interpreted animistic thinking among schizophrenics in terms of Piaget's theory. However, another interpretation could be that schizophrenics reveal animistic thinking to objects as a projective defense. Using inanimate objects as a projective defense is not the same as Piaget's description of animistic thinking in children. The adult

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schizophrenic may have an adult intellectual concept of life and still identify with and project feelings on to inanimate objects. This phenomenon may not be a simple regression to childish concepts as many clinical observers might have us believe. Freud's explanation of animism on the basis of projection is probably a better explanation of animism among psychotic patients than Piaget's explanation which is based on the developing child. In other words, the animism found among children and the animism found among schizophrenics may not be the same thing. Keeping this in mind, there is no logical reason to assume that schizophrenic children will be retarded in their concepts of life if they are compared to normals of comparable age and intellectual level.

Accordingly, the first hypothesis is there is no significant difference in the extent of animistic beliefs between schizophrenic and normal children, of comparable age and intellectual level.

The second hypothesis is that the abandonment of animistic beliefs is correlated with chronological age, and not to whether a child is normal or schizophrenic. It is predicted that there is a significant negative correlation between age and score on the test of animism for both the schizophrenic and normal subjects. The older the child, the lower his score is on the test of animism.

The third hypothesis is that the abandonment of animistic beliefs is correlated with intelligence, and not to whether a child is normal or schizophrenic. It is predicted that there is a significant negative correlation between IQ, as measured by the Peabody Picture Vocabulary Test, and scores on the test of animism

for both the schizophrenic and normal subjects. The higher the IQ of the child, the lower his score is on the test of animism.

Subjects.--Eighty subjects between the ages of 11 and 15 were selected for the study. This age range was chosen, since a discrepancy in the animistic beliefs between schizophrenic and normal children would more likely occur at these ages where animistic beliefs are being abandoned.

The 40 schizophrenic subjects were children diagnosed as such, who were not suspected of having an organic involvement. Some of the schizophrenic subjects were selected from a school for emotionally disturbed children, and some were selected from psychiatric hospitals. The 40 normal subjects were tested in recreational centers, and were selected on the basis of their overall adjustment as noted by their group leaders. Subjects who had been referred to a social agency because of adjustment problems were excluded from the study.

The normal subjects were matched individually with the schizophrenic subjects according to age, sex, and race. In addition, the two groups were matched in general for socioeconomic level, as determined by the occupation of the head of the household. To avoid the differential regression effect, the subjects were not matched individually according to intelligence test scores.

Procedures.--Intelligence was measured by the Peabody Picture Vocabulary Test (PPVT). A vocabulary test was chosen, since it is known to be least affected by the schizophrenic process. The test

of animism was based on Piaget's research, and enables the investigator to make a direct comparison of individuals. The 20 objects chosen for the test of animism are among the most universally familiar objects which can be used in a study of animism. The objects were selected, so that they represent each of the four stages delineated by Piaget.

Each subject was tested individually. The investigator asked the subject whether each of the 20 objects has life or is dead, and why. Certain objects, such as a ticking watch, were displayed to the child. All of the subjects responses were recorded verbatim.

In view of the problems encountered in other studies, as well as in the present study, in classifying responses to a questionnaire concerning animistic beliefs, a new scoring method had to be devised. The scoring method used in the present study gave a quantifiable and highly reliable measure, and avoided the crudeness of the global method which attempts to classify each subject into one of Piaget's stages of animistic beliefs. It allowed for the child who revealed beliefs that were in more than one stage of animism, and for the child who expressed animistic beliefs not delineated by Piaget.

The score on each protocol represented the total number of animistic beliefs revealed by a subject. The higher the score, the more animistic the subject's beliefs were. Only the reason that a subject gave as to why something was alive or dead was judged as to whether it revealed animistic beliefs, and not just the response that it was alive or dead.

Results.--Hypothesis I, stating that there is no significant difference in the extent of animistic beliefs between schizophrenic and normal children was accepted. The schizophrenic subjects were not found to be more animistic in their beliefs than the normal subjects, despite the fact that they were comparable in IQ as measured by the PPVT.

Hypothesis II, stating that there is a correlation between the abandonment of animistic beliefs and age was rejected. No significant difference was found between the ages of the subjects and the scores on the test of animism.

Hypothesis III, stating that there is a correlation between the abandonment of animistic beliefs and IQ was accepted for the normal group, but was rejected for the schizophrenic group. There was a significant correlation at the .05 level between IQ and animism scores for the normal group. However, there was no significant relationship between IQ and animism scores for the schizophrenic subjects.

A significant correlation was found between socioeconomic status and animism scores at the .01 level for the normal group, and at the .05 level for the schizophrenic group.

Discussion.--As was predicted, the present investigation indicated that the schizophrenic subjects were not more animistic in their beliefs than the normal subjects. However, some differences between the two groups were noted. First, the normal subjects showed a tendency to follow the expected relationship between IQ and animistic beliefs, while the schizophrenic group

and not. This suggests the unevenness of development that has been clinically observed among schizophrenic children. Secondly, the schizophrenic subjects were not consistent in their animistic or naturalistic (non-animistic) thinking as were the majority of the normal subjects. Finally, some of the schizophrenic subjects gave bizarre and personalized responses which were not found among the normal subjects.

The lack of correlation between age and animistic beliefs was probably due to the narrow age range, 11 to 15 years, chosen for this study. The age range chosen was probably too small to show a difference.

The significant correlation found between socioeconomic status and animistic scores for both groups suggested that the abandonment of animistic beliefs may have been related to the educational level of the parents. Parents with higher status occupations usually have more education. If such is the case, then the abandonment of animistic beliefs could be related to the intellectual climate in the home. It is possible that better educated parents teach their children more sophisticated ways of thinking which was reflected on the test of animism, but was not reflected on the PPVT. No correlation was found between the Peabody IQs and socioeconomic status. Perhaps children from better educated homes can verbally express themselves with greater facility which would not raise their score on a picture vocabulary test, but may have influenced their score on the test of animism where verbal responses were called for.

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The results of the present investigation are inconsistent with Piaget's theory in the following ways:

1. Piaget believed that three-fourths of children at the age of 11 or 12 abandon animistic beliefs. However, the present study revealed that 70 out of the 80 subjects still had animistic beliefs, in spite of the fact that they ranged in age from 11 to 15 years. The subjects in the present investigation came from predominantly low socioeconomic homes. This may account for the high incidence of animistic thinking in the present investigation, in view of the discovery of a significant relationship between socioeconomic status and animistic beliefs.

2. The stages of animistic beliefs were less clear-cut and inevitable than Piaget's theory indicates. The present study found that most children cannot be classified into one stage of animistic beliefs.

3. Some children revealed animistic beliefs which were not delineated by Piaget. Nevertheless, in accordance with Piaget's theory, the present investigation did show that the majority of subjects attributed life to anything which is active, useful, or moves on its own accord.

Summary.--The present study attempted to discover whether a test of animism, based on Piaget's research, would reveal a persistence of animistic beliefs among schizophrenic children. Animism refers to the attribution of life to inorganic objects.

The animistic beliefs of 40 schizophrenic children were

compared with 40 normal children. The subjects were between the ages of 11 and 15, and were of comparable intellectual level.

It was found that there was no significant difference in the extent of animistic beliefs between the normal and schizophrenic subjects. In view of this finding, there is no reason to believe that schizophrenic children should be educated any differently than normal children in this respect.

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